

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A computer-implemented method for controlling access to a data object stored in a first storage location of a hardware memory device, the data object having being assigned to an identifier (ID), the method comprising:
determining, using a processor, whether another process is attempting to perform a transaction with the data object is being archived by determining checking whether the ID is stored in a first transactional lock object;
upon determining that the ID is not stored in the transactional lock object and that another process is not attempting to perform a transaction with the data object, storing the ID in the transactional lock object;
determining, using the processor, whether another process is archiving the data object to a second storage location by determining whether the ID is stored in a permanent lock object;
checking whether the ID is associated with a second storage location; and upon determining that the ID is not stored in the permanent lock object and that another process is not archiving the data object to the second storage location, granting access to the data object if the ID is not stored in the first lock object and the ID is not associated with a second storage location.

2. (Currently Amended) The method of claim 1, further comprising:
~~deleting the ID from the first transactional lock object, if the ID is stored in the first lock object and the ID is not associated with a second storage location, after granting the access to the data object is complete.~~

3. (Currently Amended) The method of claim 1, wherein the first transactional lock object comprises a table having a first column for the ID and a second column for a link to the second storage location associated with assigned to the ID.

4. (Canceled).

5. (Original) The method of claim 1, wherein the data object comprises one or more fields of one or more tables and wherein the ID comprises one or more key fields of the one or more tables.

6. (Currently Amended) The method of claim 1, further comprising:
upon determining that the ID is stored in the permanent lock object, determining whether the ID stored in the permanent lock object is assigned to the second storage location; and

upon determining that the ID in the permanent lock object is not assigned to the second storage location, deleting the ID from the permanent lock object and granting access to the data object

~~storing the ID in a second lock object before checking whether the ID is stored in the first lock object and before checking whether the ID is associated with the second storage location.~~

7. (Currently Amended) The method of claim [[6]] 1, further comprising:
~~checking whether the ID is stored in the second lock object before granting access to the data object; and~~
upon determining that the ID is stored in the permanent lock object and that another process is archiving the data object, denying access to the data object if the ID is not stored in the second lock object.

8. (Currently Amended) A computer system for controlling access to a data object stored in a first storage location, the data object having being assigned to an identifier (ID), the computer system comprising:
memory having program instructions;
storage means for storing data;
at least one processor to execute the program instructions to perform a method comprising:
determining whether another process is attempting to perform a transaction with the data object is being archived by determining checking whether the ID is stored in a first transactional lock object;

upon determining that the ID is not stored in the transactional lock object and that another process is not attempting to perform a transaction with the data object, storing the ID in the transactional lock object;

determining whether another process is archiving the data object to a second storage location by determining whether the ID is stored in a permanent lock object; checking whether the ID is associated with a second storage location; and upon determining that the ID is not stored in the permanent lock object and that another process is not archiving the data object to the second storage location, granting access to the data object if the ID is not stored in the first lock object and the ID is not associated with a second storage location.

9. (Currently Amended) The computer system of claim 8, wherein the method further comprises:

~~deleting the ID from the first transactional lock object, if the ID is stored in the first lock object and the ID is not associated with a second storage location, after granting the access to the data object is complete.~~

10. (Currently Amended) The computer system of claim 8, wherein the first transactional lock object comprises a table having a first column for the ID and a second column for a link to the second storage location ~~associated with assigned to~~ the ID.

11. (Canceled).

12. (Original) The computer system of claim 8, wherein the data object comprises one or more fields of one or more tables and wherein the ID comprises one or more key fields of the one or more tables.

13. (Currently Amended) The computer system of claim 8, wherein the method further comprises:

upon determining that the ID is stored in the permanent lock object, determining whether the ID stored in the permanent lock object is assigned to the second storage location; and

upon determining that the ID in the permanent lock object is not assigned to the second storage location, deleting the ID from the permanent lock object and granting access to the data object

~~storing the ID in a second lock object before checking whether the ID is stored in the first lock object and before checking whether the ID is associated with the second storage location.~~

14. (Currently Amended) The computer system of claim [[13]] 8, wherein the method further comprises:

~~checking whether the ID is stored in the second lock object before granting access to the data object; and~~

upon determining that the ID is stored in the permanent lock object and that another process is archiving the data object, denying access to the data object if the ID is not stored in the second lock object.

15. (Currently Amended) A computer-readable medium comprising instructions for performing a method of controlling access to a data object stored in a first storage location of a hardware storage device, the data object having being assigned to an identifier (ID), the method comprising:

determining, using a processor, whether another process is attempting to perform a transaction with the data object is being archived by determining checking whether the ID is stored in a first transactional lock object;
upon determining that the ID is not stored in the transactional lock object and that another process is not attempting to perform a transaction with the data object, storing the ID in the transactional lock object;

determining, using the processor, whether another process is archiving the data object to a second storage location by determining whether the ID is stored in a permanent lock object;

checking whether the ID is associated with a second storage location; and upon determining that the ID is not stored in the permanent lock object and that another process is not archiving the data object to the second storage location, granting access to the data object if the ID is not stored in the first lock object and the ID is not associated with a second storage location.

16. (Currently Amended) The medium of claim 15, wherein the method further comprises:

~~deleting the ID from the first transactional lock object, if the ID is stored in the first lock object and the ID is not associated with a second storage location, after granting the access to the data object is complete.~~

17. (Currently Amended) The medium of claim 15, wherein the first transactional lock object comprises a table having a first column for the ID and a second column for a link to the second storage location ~~associated with~~ assigned to the ID.

18. (Canceled).

19. (Original) The medium of claim 15, wherein the data object comprises one or more fields of one or more tables and wherein the ID comprises one or more key fields of the one or more tables.

20. (Currently Amended) The medium of claim 15, wherein the method further comprises:

upon determining that the ID is stored in the permanent lock object, determining whether the ID stored in the permanent lock object is assigned to the second storage location; and

upon determining that the ID in the permanent lock object is not assigned to the second storage location, deleting the ID from the permanent lock object and granting access to the data object

~~storing the ID in a second lock object before checking whether the ID is stored in the first lock object and before checking whether the ID is associated with the second storage location.~~

21. (Currently Amended) The medium of claim 20, wherein the method further comprises:

~~checking whether the ID is stored in the second lock object before granting access to the data object; and~~

upon determining that the ID is stored in the permanent lock object and that another process is archiving the data object, denying access to the data object if the ID is not stored in the second lock object.

22-28. (Canceled).